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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/672,921	09/26/2003	David Woodhouse	0113715.00142US1	9463

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EXAMINER	
WOOD, WILLIAM H	
ART UNIT	PAPER NUMBER
2193	
MAIL DATE	DELIVERY MODE
03/31/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/672,921	WOODHOUSE, DAVID	
	Examiner	Art Unit	
	William H. Wood	2193	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 March 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6,8-19 and 21-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6,8-19 and 21-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *12/17/07*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claims 1-6, 8-19 and 21-23 are pending and have been examined.

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 17 March 2008 has been entered.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on 17 December 2007 has been considered by the examiner.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 11-14, 19 and 21-23 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The

claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The originally filed disclosure does not provide for "construct said seed file to maximize similarities with said target file". The originally filed disclosure makes no mention of maximization of similarities.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 11-14, 19 and 21-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Newly amended limitation, “construct said seed file to maximize similarities with said target file" is unclear. Specifically, the phrase "maximize similarities" is unclear both in meaning and in implementation. For the purposes of this rejection, the limitation is interpreted as meaning constructing the seed file to maximize similarities through maximizing a correct update of the files, thus maximizing the similarities of the updated files.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-3, 5, 7-9, 11-13, 15-16, 18-20 and 21-23 are rejected under 35 U.S.C. 102(b) as being anticipated by "Efficient Algorithms for Sorting and Synchronization" by Andrew **Tridgell**.

Claim 1

Tridgell disclosed a method for updating a seed file to match a target file *(page 49-69, chapter 3, rsync)*, said method comprising:

separating said target file into a header portion and a target file payload *(page 63, section 3.5.1, first paragraph, "normally distributed as compressed tar files", tar files known to have headers and payloads)*;

generating target file checking data for one or more blocks of said target file payload *(page 53-54, section 3.2.4)*, wherein the generating includes, for each of the one or more blocks of said target file payload, retrieving the block form memory, decompressing the block of said target file payload *(page 76, section 4.4.1, second paragraph)*, and calculating file checking data based on the decompressed block of said target file payload *(page 53-54, section 3.2.4; and page 76, section 4.4.1, second paragraph)*;

storing at least a portion of said target file checking data in a cache, wherein the cache is part of a non-volatile storage device *(pages 93-94, section 5.4, caching web servers; additionally note pages 92-95, sections 5.3 and 5.5)*;

receiving seed file checking data corresponding to one or more blocks of said seed file *(page 50, element 1, section 3.2; page 54-55, section 3.2.5)*, wherein said seed file checking data is based on a decompressed version of the one or more blocks of said seed file *(page 76, section 4.4.1, second paragraph)*;

comparing said seed file checking data with said target file checking data to identify differences in blocks of said seed file and blocks of said target file *(page 55-58, section 3.2.6)*; and

transmitting information for revising seed file blocks which are different from target file blocks such that said seed file blocks match said target file blocks *(page 58, first paragraph of section 3.2.7)*.

Claim 2

Tridgell disclosed the method of claim 1, wherein said target file checking data and said seed file checking data each comprise weak level checking data and strong level checking data, and wherein said comparing comprises comparing said weak level checking data and next comparing strong level checking data only if a match is identified in said weak level checking data *(page 53-55, section 3.2.4 and 3.2.5; in particular page 54, first paragraph under section 3.2.5)*.

Claim 3

Tridgell disclosed the method of claim 1, wherein said target file checking data and said seed file checking data each comprise a 32-bit checksum and a 128-bit checksum *(page 53-55, section 3.2.4 and 3.2.5)*.

Claim 5

Tridgell disclosed the method of claim 1, wherein said target file checking data and said seed file checking data each comprise a checksum *(page 53-55, section 3.2.4 and 3.2.5)*.

Claim 8

Tridgell disclosed the method of claim 1, wherein said seed file and said target file are decompressed prior to said generating, wherein said seed file blocks are revised in accordance with said transmitted information to match said target file blocks, and wherein said revised seed file blocks are recompressed after revising *(page 76, section 4.4.1, second paragraph)*.

Claim 9

Tridgell disclosed the method of claim 8, wherein said seed file comprises a compressed payload, previously separated from a compound file, and wherein said revised seed file is appended to a header file after said recompressing to constitute a revised compound file *(page 76, section 4.4.1, first and second*

paragraphs; compressed file formats).

Claims 11-13, 15-16, 18-20 and 23

The limitations of claims 11-13, 15-16, 18-20 and 23 correspond to claims 1, 2, 5, 8 and 9 and therefore are rejected in the same manner. **Tridgell** discloses the limitation "construct said seed file to maximize similarities with said target file" (page 50+, section 3.2, see above 112 rejection).

Claim 21

The method of claim 11, wherein said step of constructing said seed file utilizes data that is locally stored *(pages 50+, section 3.2, seed file is based off of information local to machine making seed file).*

Claim 22

The method of claim 21, wherein said seed file is a compound file comprising existing versions of individual files *(page 63, section 3.5.1, first paragraph, "normally distributed as compressed tar files", tar files known to have be built of multiple sub-files, tar files are archives).*

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 4, 6 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over "Efficient Algorithms for Sorting and Synchronization" by Andrew **Tridgell**.

Claims 4 and 17

Tridgell disclosed the method of claim 1, wherein said target file checking data and said seed file checking data each comprise weak level checking data and strong level checking data, and wherein said storing comprises storing said weak level checking data associated with said target file *(page 53-55, section 3.2.4 and 3.2.5; in particular page 54, first paragraph under section 3.2.5)*. **Tridgell** did not explicitly state *and storing only said strong level checking data associated with said target file expected to match strong level checking data associated with said seed file*. However, **Tridgell** demonstrated that it was known at the time of invention to use the strong level checking data sparingly (*page 53-55, section 3.2.4 and 3.2.5; in particular page 54, first paragraph under section 3.2.5*). It would have been obvious to one of ordinary skill in the art at the time of invention to compute and thus store strong level data only as anticipated as being needed as suggested by **Tridgell**'s own teaching. This implementation would have been obvious because one of ordinary skill in the

art would be motivated to save in expensive computation and time by "preventing excessive use of the strong signature algorithm".

The limitations of claim 17 correspond to claim 4 and therefore are rejected in the same manner.

Claim 6

Tridgell did not appear to explicitly state *wherein said target file checking data stored in a cache are used with multiple updating requests received from a plurality of clients*. However, **Tridgell** demonstrated that it was known at the time of invention to provide information to multiple clients (page 80, section 4.5, first three paragraphs). It would have been obvious to one of ordinary skill in the art at the time of invention to implement the rsync system with a plurality of clients as found in the *web* as found in **Tridgell**'s own teaching. This implementation would have been obvious because one of ordinary skill in the art would be motivated to make efficient file/data synchronization available the network thus reducing latency.

9. Claims 10 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over "Efficient Algorithms for Sorting and Synchronization" by Andrew **Tridgell** in view of Applicant Admitted Prior Art (MPEP2144.03, section C.).

Claims 10 and 14

Tridgell did not explicitly state *wherein said compound file and said revised compound file comport with an RPM Package Manager format.* Applicant Admitted Prior Art (MPEP 2144.03, section C., over uncontested Official Notice) is referenced that it was known at the time of invention to make use of RPM Package Manager format. It would have been obvious to one of ordinary skill in the art at the time of invention to implement the file/data synchronization system of **Tridgell** with RPM format. This implementation would have been obvious because one of ordinary skill in the art would be motivated to provide a standard tool end users are already familiar with for delivering files/data for synchronization.

The limitations of claim 14 correspond to claim 10 and therefore are rejected in the same manner.

Response to Arguments

10. Applicant's arguments filed 17 March 2008 have been fully considered but they are not persuasive. Applicant argues: **Tridgell** implies no need for caching; and **Tridgell** is citing unrelated prior art caching. First, whether or not certain calculations are or are not a bottleneck does not indicate whether **Tridgell** would use a cache. As is well known in the art, just because a computation is easy or quick does not negate the positive effect of not having to

re-perform the computation in the first place. Second, reading further on page 93, section 5.4, last paragraph (going to next page), **Tridgell** states "contained the fast and strong signatures ... in the local cache". While the cited reference is discussing the prior art, it is also discussing implementing those prior systems with the new technology provided by the reference. Therefore, Applicant's arguments are not persuasive.

Correspondence Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William H. Wood whose telephone number is (571)-272-3736. The examiner can normally be reached 10:00am - 4:00pm Tuesday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lewis A. Bullock Jr. can be reached on (571)-272-3759. The fax phone numbers for the organization where this application or proceeding is assigned are (571)273-8300 for regular communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained form either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR systems, see http://pair-direct.uspto.gov. For questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-3900.

/William H. Wood/
William H. Wood
Primary Examiner, Art Unit 2193
March 31, 2008